

Work Order ID 146219

Thursday, May 12, 2016 2:19:17 PM

146219

AOG.
U/R

OK 4/16/5/12

Page 1

Item ID: D205-541-051

Accept

N900040100

Setup Start *NS1*

Revision ID: URF 16 573

Stop *NS2*

Item Name: Automatic Lid Opener

Start Date: 5/12/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 5/12/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: *dem*

Date: 16/05/12

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI 9710	A								
100		0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork Photocopy bluefile and create labels as per PPP D205-541-051 Chg 001									
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.00							
Quality Control									

MLJ

MAY 12 2016

MAY 12 2016

MAY 12 2016

MAY 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

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146219

Page 2

Item ID: D205-541-051

Accept

N900040100Setup Start ***NS1***

Revision ID: URF 16-573

Item Name: Automatic Lid Opener

Stop ***NS2***

Start Date: 5/12/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 5/12/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130						27			
Packaging	Memo	0.00				9-89			
Packaging	Identify and pack for shipping as per PPP D205-541-051 Location: _____								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

sold

MAY 12 2016

MCJ

MAY 12 2016

MCJ

MAY 12 2016

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER :							
Misidentified ☐	☐ Past Due								

Picklist Print

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Page 1

Work Order ID: 146219

146219

Parent Item: D205-541-051

D205-541-051

Parent Item Name: Automatic Lid Opener

Start Date: 5/12/2016

Required Date: 5/12/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 15.03.26 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3953-3		Manufactured	No				Each	63.0000		4			
---------	--	--------------	----	--	--	--	------	---------	--	---	--	--	--

D3953-3

Gas Spring Stud, Lid

DAS
6
9-89

MLJ

DAS
27
9-89

Location

Loc Qty

Loc Code

ST062

22

141606

22

ST064A

41

144775

41

D3953-7		Manufactured	No				Each	24.0000		4			
---------	--	--------------	----	--	--	--	------	---------	--	---	--	--	--

D3953-7

Spring Spacer

DAS
6
9-89

MLJ

DAS
27
9-89

Location

Loc Qty

Loc Code

ST062

24

138972

24

D3953-9		Manufactured	No				Each	21.0000		4			
---------	--	--------------	----	--	--	--	------	---------	--	---	--	--	--

D3953-9

Gas Spring Washer

DAS
6
9-89

MLJ

DAS
27
9-89

Location

Loc Qty

Loc Code

ST062

21

141591

21

D3953-17		Manufactured	No				Each	29.0000		6			
----------	--	--------------	----	--	--	--	------	---------	--	---	--	--	--

D3953-17

Gas Spring Spacer

DAS
6
9-89

MLJ

DAS
27
9-89

Location

Loc Qty

Loc Code

ST062

29

141477

11

142705

18

MAY 12 2016

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WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

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Work Order ID: 146219

146219

Parent Item: D205-541-051

D205-541-051

Parent Item Name: Automatic Lid Opener

Start Date: 5/12/2016

Required Date: 5/12/2016

Start Qty: 1.00

Required Qty: 1.00

D3953-19	Manufactured	No	Each	25.0000	2	DAS 8 9-89	MLJ
D3953-19							
Gas Spring Bracket							

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>		
D3953-21	Manufactured	No	ST062	25		2	DAS 8 9-89
D3953-21			138913	25		2	MLJ
Gas Spring Bracket							

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>		
D3969-3	Manufactured	No	ST063	17			DAS 8 9-89
D3969-3			139553	2		2	MLJ
Spring (Basket Lid)			141546	15			

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>		
AN3-14A	Purchased	No	ST365	20		4	DAS 8 9-89
AN3-14A			140555	2		2	MLJ
Bolt			141701	8			
			143820	10			

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>		
			over003	80			
			m134360	30			
			m134634	50			
			ST349	43			
			m133992	43		4	

MAY 12 2016

DQA: _____ Date: _____



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QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

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Work Order ID: 146219

146219

Parent Item: D205-541-051

D205-541-051

Parent Item Name: Automatic Lid Opener

Start Date: 5/12/2016

Required Date: 5/12/2016

Start Qty: 1.00

Required Qty: 1.00

AN3-20A Purchased No

Each 17.0000 4

AN3-20A

Bolt

**

DAS

6

9-89

MLJ

DAS

27

9-89

Location

Loc Qty

Loc Code

ST348

17

117441

17

Each 85.0000

4

AN310-4 Purchased No

AN310-4

Nut

**

DAS

6

9-89

MLJ

Location

Loc Qty

Loc Code

GA

25

M127815

25

OVER007

50

M134180

50

ST331

10

M133990

10

Each 2,136.000

8

MS21042L3 Purchased No

MS21042L3

Nut

**

DAS

6

9-89

MAY 12 2016

Location

Loc Qty

Loc Code

FP001

100

m133790

100

GA

629

m133790

3

m134360

626

ST303

1407

m134039

12

m134360

195

m134634

600

m134754

600

6

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Shop Packet Print

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
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Work Order ID: 146219

146219

Parent Item: D205-541-051

D205-541-051

Parent Item Name: Automatic Lid Opener

Start Date: 5/12/2016

Required Date: 5/12/2016

Start Qty: 1.00

Required Qty: 1.00

MS24665-231

Purchased

No

Each

149.0000

4

MS24665-231

cotter pin

DAS
27
9-89

Location

Loc Qty

Loc Code

ST289

149

113815

149

Each

384.0000

16

**

DAS

6

9-89

MLJ

NAS1149F0363P

Purchased

No

NAS1149F0363P

WASHER

DAS
27
9-89

Location

Loc Qty

Loc Code

ST262

384

124555

384

Each

862.0000

4

**

DAS

6

9-89

MLJ

NAS1149F0463P

Purchased

No

NAS1149F0463P

Washer

DAS
27
9-89

Location

Loc Qty

Loc Code

ST262

862

m127832

862

DAS

6

9-89

MLJ

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D205-541 REV. J &
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D205-541 REV. 4

REF. TCCA STC SH96-120,
FAA STC SR00696NY
EASA STC EASA.IM.R.S.01242

1.0 Purpose:

The purpose of this DSI is to provide operators of Bell 205/210/212/214/412 Rotorcraft equipped with Dart D205-541-043/-044/-045/-046 Heli-Utility-Baskets with an Upgrade Kit to replace the existing Lid Prop Arm Assembly with an Automatic Lid Opening Gas Spring Kit. The D205-541-051 Automatic Lid Opener Kit includes parts and hardware to install a gas spring on both ends of the basket.

2.0 Parts List:

ITEM No.	QTY -051	PART NUMBER	DESCRIPTION
	X	D205-541-051	AUTOMATIC LID OPENER KIT
1	4	D3953-3	GAS SPRING STUD
2	4	D3953-7	GAS SPRING SPACER
3	4	D3953-9	GAS SPRING WASHER
4	6	D3953-17	GAS SPRING SPACER
5	2	D3953-19	GAS SPRING BRACKET
6	2	D3953-21	GAS SPRING BRACKET
8	2	D3969-3	GAS SPRING
9	4	AN3-14A	BOLT
10	4	AN3-20A	BOLT
11	4	AN310-4	CASTELLATED NUT
12	8	MS21042L3	NUT
13	4	MS24665-231	COTTER PIN
14	16	NAS1149F0363P	WASHER
15	4	NAS1149F0463P	WASHER

*Note:

For customers wishing to order new baskets with the Lid Opener pre-installed, use the following numbers:

D205-541-043 BASKET with AUTOMATIC LID OPENER installed = D205-541-043A
D205-541-044 BASKET with AUTOMATIC LID OPENER installed = D205-541-044A
D205-541-045 BASKET with AUTOMATIC LID OPENER installed = D205-541-045A
D205-541-046 BASKET with AUTOMATIC LID OPENER installed = D205-541-046A

3.0 PROCEDURE:

For D205-541-043/-044/-045/-046 Heli-Utility Baskets, replace the existing Prop Arm Assembly with gas springs on both ends of the basket.

(NOTE: Once this modification is complete, it will not be possible to re-install the D2332-041 Prop Arm Assembly)

3.1 Remove the D2332-041 Prop Arm Assembly.

3.2 Grind flush the D2327-3 Spacer Bushing from the end of the basket base. Touch up paint per ICA-D205-541, Section 5.1.5.

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DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 15.02.23
CERT. NO.: SH96-120
ISSUE NO.: 3

A	NEW ISSUE	DB	15.02.23
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD	
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9710	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		AUTOMATIC LID OPENER INSTALLATION	NTS
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WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER :							
Misidentified ☐	☐	Past Due								

- 3.3 Locate the D3953-17 Gas Spring Spacer on the basket lid per Figure 1 (-043/-044) or Figure 2 (-045/-046). Trim steel mesh locally as required. Transfer mark and drill 2X $\varnothing 0.194$ holes thru basket lid. Touch up paint per ICA-D205-541, Section 5.1.5. (Later model D2512 Basket Lids may be pre-drilled for gas spring brackets)
- 3.4 Install D3953-17 Gas Spring Spacer (qty 2) and D3953-19 Gas Spring Bracket to the basket lid using 2X AN3-20A bolts, NAS1149F0363P Washers and MS21042L3 Nuts as shown in Figure 3.
- 3.5 Locate the D3953-17 Gas Spring Spacer on the basket base as shown in Figure 1 (-043/-044) or Figure 2 (-045/-046). Trim steel mesh locally as required. Transfer mark and drill 2X $\varnothing 0.194$ holes thru the basket base. Touch up paint per ICA-D205-541, Section 5.1.5.
- 3.6 Install the D3953-17 Gas Spring Spacer and D3953-21 Gas Spring Bracket to the basket base using 2X AN3-14A bolts, NAS1149F0363P Washers and MS21042L3 Nuts, as shown in Figure 3.
- 3.7 Insert D3953-3 Gas Spring Studs through the D3953-19 and D3953-21 Gas Spring Brackets from the inside of the basket. (May be performed prior to 3.6 if necessary because of basket mesh).
- 3.8 Install a D3953-7 Spacer on to each stud followed by the D3969-3 Gas Spring, D3953-9 Gas Spring Washer, NAS1149F0463P Washer and AN310-4 Castellated Nut. To secure the nut, install a MS24665-231 Cotter Pin into the D3953-3 Gas Spring Stud. Install the Cotter Pin per MS33540 or AC43.13 Chapter 7-127.
NOTE: With the Lid in the closed position, the Gas Spring should **NOT** be fully compressed
- 3.9 Repeat the installation on the opposite end of the basket.
- 3.10 Test the installation. If installed properly, the Gas Springs should assist in both opening and closing the basket lid.

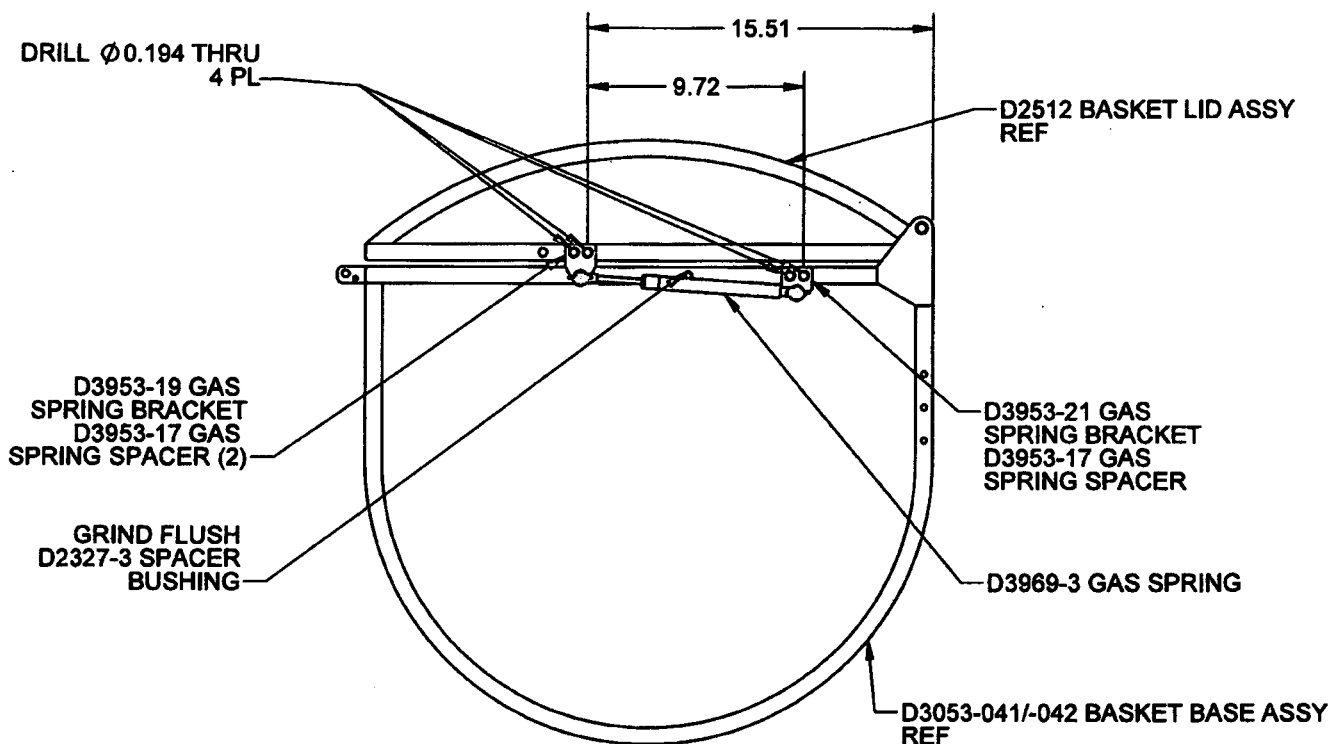


FIGURE 1: D205-541-051 AUTOMATIC LID OPENER INSTALLATION
(ON D205-541-043/-044 HELI-UTILITY BASKET, BOTH ENDS)

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BRANCH
DAO # 01-O-01

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BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 15.02.23
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MFG. APPR.	N/A	DSI 9710	SHEET 2 OF 4
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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																									
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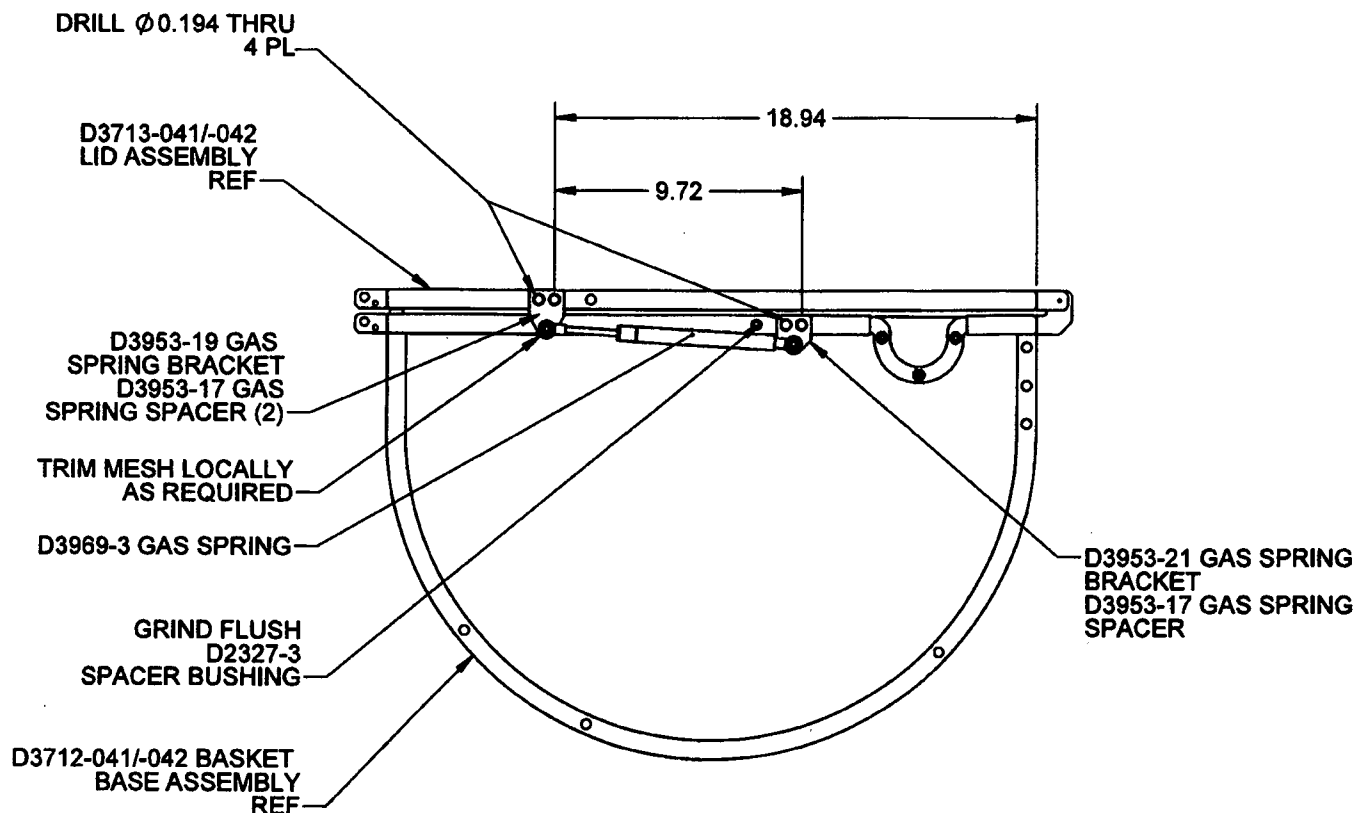


FIGURE 2: D205-541-051 AUTOMATIC LID OPENER INSTALLATION
(ON D205-541-045/-046 HELI-UTILITY-BASKET, BOTH ENDS)
(MESH NOT SHOWN FOR CLARITY)

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AIRCRAFT CERTIFICATION
BRANCH
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APPROVED

BY:

D. SHEPHERD (DE # 02)

DATE: 15.02.23
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DESIGN	DB	DART AEROSPACE LTD	
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MFG. APPR.	N/A	DSI 9710	SHEET 3 OF 4
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WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
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Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
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				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
				OTHER : ☐			

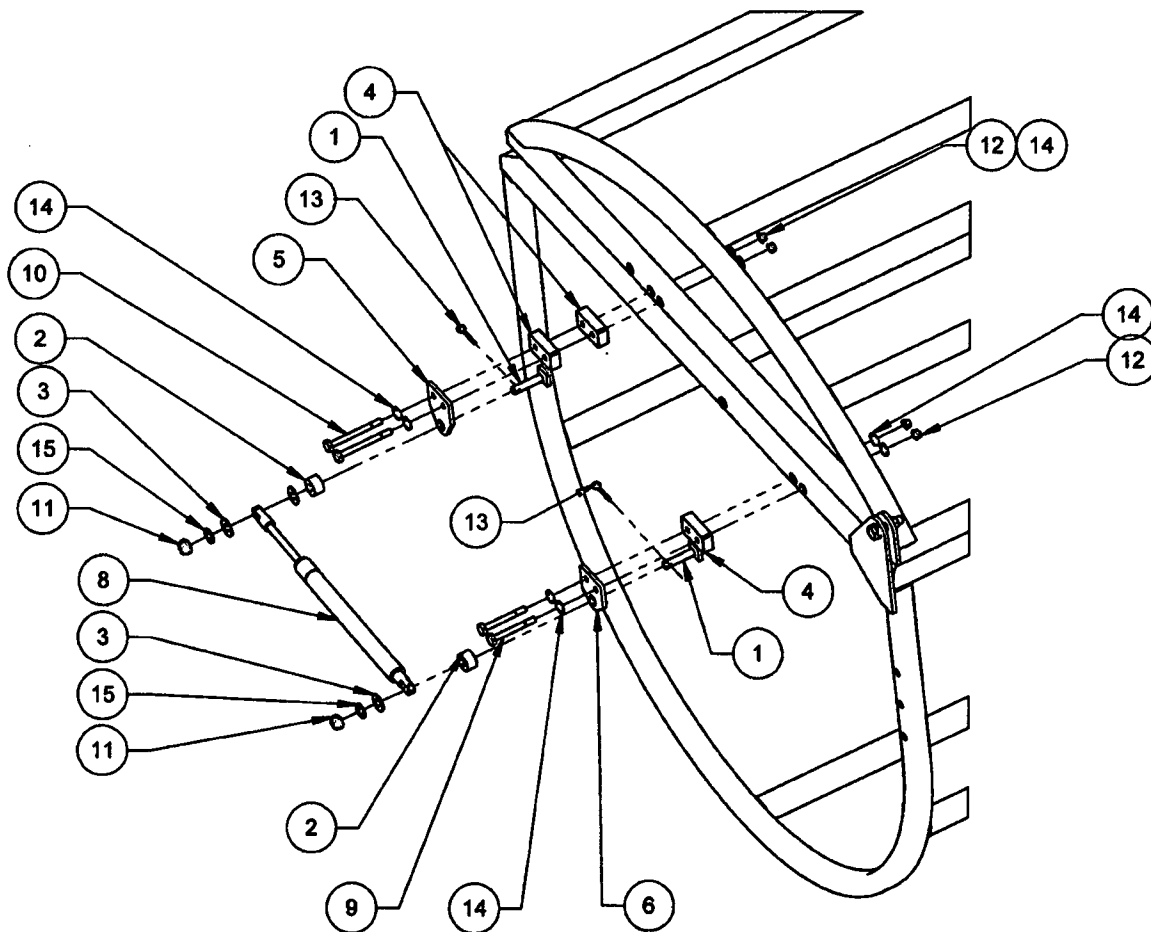


FIGURE 3: D205-541-051 GAS SPRING KIT INSTALLATION
(ON D205-541-043/-044: LH SIDE, AFT END SHOWN/RH SIDE AND FWD END SIMILAR)
(MESH NOT SHOWN FOR CLARITY)

4.0 WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D205-541-051	0.66 lb	- 63.13 in	- 41.7 in-lb	132.25 in	87.3 in-lb
Automatic Lid Opener Kit	0.30 kg	- 1.60 m	- 0.5 m-kg	3.36 m	1.0 m-kg

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DAO # 01-O-01

APPROVED
BY: *[Signature]*
D. SHEPHERD (DE # 02)

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DRAWN	DB
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APPROVED	<i>[Signature]</i>
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DATE	15.02.23

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.
DSI 9710

REV. A

SHEET 4 OF 4

TITLE
**AUTOMATIC LID
OPENER INSTALLATION**

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Root Cause				FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : ☐											

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D205-541 REV. J &
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D205-541 REV. 4
REF. TCCA STC SH96-120,
FAA STC SR00696NY
EASA STC EASA.IM.R.S.01242

1.0 Purpose:

The purpose of this DSI is to provide operators of Bell 205/210/212/214/412 Rotorcraft equipped with Dart D205-541-043/-044/-045/-046 Heli-Utility-Baskets with an Upgrade Kit to replace the existing Lid Prop Arm Assembly with an Automatic Lid Opening Gas Spring Kit. The D205-541-051 Automatic Lid Opener Kit includes parts and hardware to install a gas spring on both ends of the basket.

2.0 Parts List:

ITEM No.	QTY -051	PART NUMBER	DESCRIPTION
	X	D205-541-051	AUTOMATIC LID OPENER KIT
1	4	D3953-3	GAS SPRING STUD
2	4	D3953-7	GAS SPRING SPACER
3	4	D3953-9	GAS SPRING WASHER
4	6	D3953-17	GAS SPRING SPACER
5	2	D3953-19	GAS SPRING BRACKET
6	2	D3953-21	GAS SPRING BRACKET
8	2	D3969-3	GAS SPRING
9	4	AN3-14A	BOLT
10	4	AN3-20A	BOLT
11	4	AN310-4	CASTELLATED NUT
12	8	MS21042L3	NUT
13	4	MS24665-231	COTTER PIN
14	16	NAS1149F0363P	WASHER
15	4	NAS1149F0463P	WASHER

*Note:

For customers wishing to order new baskets with the Lid Opener pre-installed, use the following numbers:

D205-541-043 BASKET with AUTOMATIC LID OPENER installed = D205-541-043A
D205-541-044 BASKET with AUTOMATIC LID OPENER installed = D205-541-044A
D205-541-045 BASKET with AUTOMATIC LID OPENER installed = D205-541-045A
D205-541-046 BASKET with AUTOMATIC LID OPENER installed = D205-541-046A

3.0 PROCEDURE:

For D205-541-043/-044/-045/-046 Heli-Utility Baskets, replace the existing Prop Arm Assembly with gas springs on both ends of the basket.

(NOTE: Once this modification is complete, it will not be possible to re-install the D2332-041 Prop Arm Assembly)

3.1 Remove the D2332-041 Prop Arm Assembly.

3.2 Grind flush the D2327-3 Spacer Bushing from the end of the basket base. Touch up paint per ICA-D205-541, Section 5.1.5.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 15.02.23
CERT. NO.: SH96-120
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CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9710	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		AUTOMATIC LID OPENER INSTALLATION	NTS
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